

Alcohol Level and Home Accidents

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THE RELATIONSHIP between alcohol and accidental injuries and deaths has frequently been investigated, but major research has been limited primarily to traffic accidents. In an extensive review, Haddon (1) concluded that a significant relationship had been established between the ingestion of alcohol and the occurrence of traffic accidents. Demone and Kasey (2) reviewed studies of nonmotor vehicle accidents and reported high frequencies of elevated alcohol levels in injured persons. Most of these studies, however, dealt with industrial accidents. In the few that did not, information was lacking on the specific place where the accident occurred. Only two studies were found in the literature concerning the role of alcohol in home accident injuries—our major interest.

In a study of 94 home accident victims admitted to the emergency floor of the Boston (Mass.) City Hospital, Kirkpatrick and Taubenhaus (3) obtained inconclusive results on the relationship between alcohol level and type of injury, length of disability, and disposition of the patient. A report by the Metropolitan Life Insurance Co.

(4) concluded that alcohol is an important factor in fatal home accidents among young and middle-aged adults, based on a review of the records of "ordinary life insurance" policyholders who died in home accidents in 1964 and 1965. However, involvement of alcohol was usually inferred from descriptions in the records, since objective measures of alcohol level were not available in most instances.

Lack of systematic research on such an important public health problem as the role of alcohol consumption in home accidents prompted this study. Specifically, our purpose was to test the null hypothesis that the level of alcohol in a population admitted to a hospital emergency service for treatment of home accident injuries does not differ from the level of alcohol in a population admitted for other reasons.

Research Design

Our study was conducted in the emergency service of the Massachusetts General Hospital in Boston. This site was selected because of its large annual intake of patients and the interest of the hospital administration and staff in the problem being investigated.

The sample was comprised of patients 16 years of age and older, who were admitted to the hospital's emergency service from October 2, 1966, through September 29, 1967. These patients were interviewed during one 8-hour shift of each 24-hour period for 363 consecutive days. The interviews were held during a particular shift on every third day of the study. At least one shift was included on each holiday. This procedure resulted in a one-third sample of all

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shifts, with an equal distribution of shifts, days of the week, and months of the year.

Patients routinely excluded from the study were those admitted for psychiatric reasons including alcoholics without injury and persons suspected of attempting suicide by ingestion, those who received only postoperative or continuing care in the emergency service, and those with dental problems of nontraumatic origin. Persons dead on arrival were not included because blood samples for determining alcohol concentration and pertinent information concerning cause of death were difficult to obtain.

The interview was designed to obtain a description of circumstances surrounding the accident or onset of acute symptoms as well as relevant biographical material and information concerning drinking behavior. Patients were interviewed in the emergency service whenever possible. If the patient was too ill to be interviewed in the emergency service and was subsequently admitted to a unit in the hospital, information was obtained either from hospital records or from an interview with the patient or one of his visitors during confinement.

A Breathalyzer reading taken during the interview was used as the primary index of blood alcohol concentration. Studies of the accuracy of breath-sampling methods (5, 6) have correlated blood alcohol levels obtained by direct analysis of the blood with those obtained by analyzing breath samples taken simultaneously. Borkenstein and co-workers (7) have documented the reliability and accuracy of the Breathalyzer in estimating blood alcohol concentrations. If a breath sample could not be procured but a blood sample drawn by the admitting physician was available, the blood sample was used to determine alcohol level. The interviewer also attempted to detect the odor of alcohol on the breath of the patient at the time of admission.

A home accident injury was defined as "any wound or damage to a person occurring in a home or its premises as a result of a chain of events the consequences of which were unintended" (8). Injuries to domestic or service personnel working in private homes were treated as occupation injuries rather than home accident injuries.

The 1965 revised International Classification

of Diseases (9) was used to code all accident and nonaccident cases. Accident cases were coded according to the external cause and nature of the injury and categorized as home, transportation, occupation, and "other" accidents. An additional category comprised all patients injured in fights or assaults. Nonaccident cases were categorized as diseases of the circulatory system, diseases of the digestive system, symptoms referable to systems or organs, and "other" medical conditions.

Alcohol levels in home accident victims were compared with those of persons admitted for other reasons. Because of the small number of patients with alcohol levels above 0.05 percent, Breathalyzer readings were categorized as follows: (a) 0.00 percent (negative), (b) 0.01 to 0.04 percent, and (c) 0.05 percent and over. For some analyses, cell sizes necessitated the use of two categories: (a) patients with readings of 0.00 percent (negative) and (b) those with readings of 0.01 percent and over (positive).

The Sample

During the 1-year investigation, 16,861 persons were admitted to the emergency service during the study shifts. Of this number, 2,392 were below the age of 16. Of the 14,469 persons who were 16 years of age and older, it was estimated, from a 10 percent sample of excluded patients, that 2,825 were ineligible for the study. A breakdown of the ineligibles indicated that approximately 2,000 were psychiatric patients, 500 were postoperative or continuing care patients, and 300 were dental patients with problems of nontraumatic origin. Thus 11,644 patients were eligible for the project. The 8,461 patients who were included comprised 73 percent of those who were eligible; 3,183 patients were missed by the interviewers.

Despite the inclusion in the study of almost three of four eligible patients, it was important to examine the characteristics of the missed patients to learn whether any bias existed in the inclusion procedures. Therefore, the hospital records were examined for a 10 percent sample, or 313 missed patients. Information was abstracted from the patient's record on the presence or absence of injury at the time of admission, on indications of alcoholism or intoxi-

cation, on the length of time the patient remained in the emergency service, the extent of treatment he received, and the necessity of immediate hospitalization. Comparable information was obtained for 237 randomly selected patients in the study sample.

Comparison of the two groups revealed that injury cases were included more frequently for patients in the sample (54 percent) than for those who were missed (39 percent): $\chi^2=12.29$, 1 degree of freedom, $P<0.001$. Furthermore, the included patients did not differ from the missed patients in evidence of alcoholism or drinking before admission: 6 versus 7 percent; $\chi^2=0.28$, 1 degree of freedom, not significant. Thus there apparently was no systematic exclusion from the sample of persons with injuries or of persons with positive alcohol levels.

As might be expected, the missed patients tended to remain in the emergency service for a shorter time; 44 percent remained for less than 1 hour as compared with only 7 percent of the sample patients. The conditions that brought the missed patients to the emergency service were less severe, as indicated by the extent of treatment received; 42 percent were given an examination only in contrast to 10 percent of the sample patients. And not as many missed patients needed immediate hospitalization; only 10 percent required admission to the hospital as compared with 35 percent of the sample patients.

Information was collected on 8,461 sample patients 16 years of age and older. Seventy-eight percent of the questionnaires were completed during interviews with patients in the emergency service, 18 percent through followup procedures in the hospital, and 4 percent through interviews with persons who accompanied the patients to the emergency service.

Breathalyzer tests were done on 74 percent (6,266) of the sample patients. Of the 2,195 patients for whom no Breathalyzer reading was obtained, other indications of alcohol involvement were available for 1,332 persons. These indicators included venous blood analyses and observations by the interviewers regarding the presence or absence of alcohol odor on the breath of the patient at the time of admission. No information concerning alcohol involvement was available for the remaining 863 persons. Only

3 percent of the total sample, or 224 persons, refused to take a Breathalyzer test.

Because classification by diagnosis or cause of the condition was impossible for 754 patients on whom Breathalyzer readings or other indications of alcohol involvement were available, they were removed from the sample. Thus the sample on which the statistical analyses were made comprised 6,844 patients: 5,622 for whom Breathalyzer readings were available and 1,222 with other indications of the presence or absence of alcohol.

Results

Analysis of the data presented in table 1 revealed a statistically significant relationship between Breathalyzer results and reasons for admission to the emergency service: $\chi^2=546.05$, 16 degrees of freedom, $P<0.001$. To evaluate major trends, several other chi-square analyses were done on the data in this table. Not all these analyses were independent of each other, and this fact should be considered when interpreting the findings. The pattern of results, however, is strikingly clear.

Home accident injuries. A positive Breathalyzer reading was obtained from 22 percent of the patients with home accident injuries (table 1)—a significantly higher alcohol involvement than for nonaccident patients ($\chi^2=115.36$, 2 degrees of freedom, $P<0.001$) or patients with oc-

Table 1. Breathalyzer alcohol level, by reason for admission of patient

Reason for admission	Number of patients	Percent negative readings	Percent positive readings	
			0.01-0.04	0.05 and over
Total....	5, 622	83. 2	9. 0	7. 7
Accidents.....	2, 801	78. 5	11. 0	10. 5
Home.....	620	77. 7	11. 0	11. 3
Transportation.....	404	70. 5	12. 4	17. 1
Occupation....	969	84. 4	10. 6	4. 9
Other.....	808	75. 9	10. 9	13. 2
Nonaccidents...	2, 633	91. 2	6. 3	2. 6
Circulatory....	255	92. 2	6. 3	1. 6
Digestive....	481	92. 1	5. 2	2. 7
Symptom....	551	90. 9	5. 8	3. 3
Other.....	1, 346	90. 7	6. 8	2. 5
Fights or assaults.....	188	43. 6	17. 6	38. 8

cupation accident injuries ($\chi^2=22.54$, 2 degrees of freedom, $P<0.001$). Patients with transportation accident injuries ($\chi^2=8.15$, 2 degrees of freedom, $P<0.02$) or injuries resulting from fights or assaults ($\chi^2=90.89$, 2 degrees of freedom, $P<0.001$) had higher percentages of positive alcohol readings than those with home accident injuries. Readings for patients with home accident injuries did not differ from those for patients with "other" accident injuries ($\chi^2=1.24$, 2 degrees of freedom, not significant).

Comparison of accident cases. For accident cases the type of accident was related to involvement of alcohol at a statistically significant level: $\chi^2=60.38$, 6 degrees of freedom, $P<0.001$. Transportation accident patients had the greatest proportion of positive readings (29.5 percent). Of 404 patients, 349 were drivers or passengers of motor vehicles and 44 were pedestrians. The role of the remaining 11 patients was not known. Occupation accident patients had the lowest proportion (15.5 percent), while the proportion for home (22.3 percent) and "other" (24.1 percent) accident patients was intermediate. In addition to the findings reported on home accident injuries, chi-square comparisons of separate categories indicated that transportation accidents differed significantly from occupation accidents ($\chi^2=56.81$, 2 degrees of freedom, $P<0.001$) but not from "other" accidents ($\chi^2=4.28$, 2 degrees of freedom, not significant), and occupation accidents differed significantly from "other" accidents ($\chi^2=38.73$, 2 degrees of freedom, $P<0.001$).

Comparison of nonaccident cases. Nonaccident patients with circulatory diseases, digestive diseases, symptom disorders, or other medical conditions did not differ in alcohol levels: $\chi^2=3.99$, 6 degrees of freedom, not significant. Thus for the remainder of the analyses all nonaccident cases were combined without regard to specific diagnosis.

Accident versus nonaccident cases. Twenty-two percent of the accident cases involved alcohol as compared with only 9 percent of the nonaccident cases. The difference was statistically significant: $\chi^2=188.70$, 2 degrees of freedom, $P<0.001$.

Accidents by type versus nonaccidents. Despite the previously cited differences among accident cases, comparisons showed that all types

Table 2. Presence of alcohol, determined by positive venous blood sample or alcoholic breath, by reason for admission of patient

Reason for admission	Number of patients	Alcohol involvement	
		Percent negative	Percent positive
Total.....	1, 222	90. 8	9. 2
Accidents.....	310	78. 7	21. 3
Home.....	62	82. 3	17. 7
Transportation....	83	59. 0	41. 0
Occupation.....	76	86. 8	13. 2
Other.....	89	87. 6	12. 4
Nonaccidents.....	892	95. 7	4. 3
Fights or assaults....	20	55. 0	45. 0

of accident cases differed beyond the 0.001 level of significance from nonaccident cases with respect to levels of alcohol. The chi-square values for 2 degrees of freedom were as follows: home accidents, 115.36; transportation accidents, 198.46; occupation accidents, 34.08; and "other" accidents, 172.62.

Fights and assaults. More than half (56.4 percent) of the patients with injuries resulting from fights or assaults had positive alcohol readings and 39 percent had readings of 0.05 percent or higher. When cases of fights and assaults were compared with nonaccident cases, a statistically significant relationship was present: $\chi^2=538.16$, 2 degrees of freedom, $P<0.001$. A statistically significant relationship also was found in a comparison of cases of fights and assaults with all accident cases: $\chi^2=149.79$, 2 degrees of freedom, $P<0.001$.

Other signs of alcohol involvement. Distribution of the 1,222 patients in the sample for whom venous blood analyses or observations of alcoholic breath were available is shown in table 2. No Breathalyzer readings were obtained from these patients. The relationship between these signs of alcohol involvement and reason for admission was statistically significant ($\chi^2=164.13$, 5 degrees of freedom, $P<0.001$) and, with one exception, separate chi-square analyses were in agreement with the findings based on Breathalyzer readings. Positive venous blood tests or alcoholic breath occurred significantly more often among transportation accident patients than among patients injured in any other type

of accident. However, unlike positive Breathalyzer readings, other positive signs of alcohol were not less frequent among occupation accident patients. Positive venous blood tests or alcoholic breath were observed with approximately equal frequency among home, occupation, and "other" accident patients.

Breathalyzer results controlled by time of drinking. On admission to the emergency service, patients were asked whether they had consumed alcohol after the accident or onset of symptoms. Of 5,248 cases for which information was available, 600 patients (11.4 percent) replied that they had a drink after the episode and 4,648 (88.6 percent) said they had not. Information also was obtained on the time interval between the occurrence of the accident or symptom onset and arrival at the emergency service.

For purposes of analysis, the patients were divided into two groups: those who had consumed alcohol after the accident or symptom onset (group 1) and those who had not (group 2). Group 2 was divided into three categories on the basis of how soon the patients arrived in the emergency service after the accident or symptom onset: (a) in less than 3 hours, (b) in 3 to 6 hours, or (c) in 7 or more hours.

Chi-square analyses indicated that for three groups the relationship between level of alcohol and reason for admission was statistically significant beyond the 0.001 level. Chi-square values for 5 degrees of freedom were as follows: group 1, 25.27; group 2a, 281.32; and group 2b,

45.47. Chi-square values could not be computed for group 2c because one cell had no observed cases; the direction of the relationship was maintained for this group, however. As shown in table 3, the presence of alcohol was highest in group 1, who reported having a drink after the episode (38.2 percent with a positive Breathalyzer reading) as compared with the groups who reported no drinking after the episode: group 2a, 19.4 percent; group 2b, 11.0 percent; and group 2c, 7.8 percent. For groups 2a, 2b, and 2c, the frequency of positive alcohol readings was related to delay between accident or onset of symptoms and arrival at the emergency service.

In all groups, persons admitted for home accident injuries had a higher involvement of alcohol than those admitted for nonaccident reasons but lower than those admitted for transportation accident injuries. Furthermore, there was greater involvement of alcohol in all types of accidents as compared with nonaccidents. The greatest involvement was found in transportation accidents and in injuries resulting from fights or assaults. Thus the major relationships held whether alcohol was or was not consumed after the accident or onset of symptoms and regardless of the time interval between the episode and arrival in the emergency service.

The relationship of alcohol involvement to reason for admission, controlled for social background characteristics. Because sex, age, marital status, and social class have been significantly

Table 3. Percentage of patients with positive Breathalyzer readings, by reason for admission, controlled for drinking chronology and delay of treatment

Reason for admission	Group 1, with drink after episode (N=600)	Group 2, with no drink after episode, who entered emergency service in—		
		less than 3 hours (N=2,418)	3-6 hours (N=699)	7 or more hours (N=1,531)
Total.....	38.2	19.4	11.0	7.8
Accidents.....	43.5	21.6	18.2	10.1
Home.....	40.0	26.9	17.4	10.0
Transportation.....	47.4	31.8	32.4	0
Occupation.....	46.6	11.8	14.3	11.9
Other.....	43.0	27.3	15.8	10.9
Nonaccidents.....	28.2	8.0	6.0	5.8
Fights or assaults.....	71.4	63.7	41.7	24.2

NOTE: Information on 1 or both variables not available for 374 patients.

associated in other studies with involvement of alcohol, it was necessary to control for these variables in examining associations between level of alcohol and reason for admission.

SEX. Reason for admission was significantly related to the presence of alcohol for both men and women: men, $\chi^2=327.72$, 5 degrees of freedom, $P<0.001$; and women, $\chi^2=65.85$, 5 degrees of freedom, $P<0.001$. Persons of both sexes who were admitted for accidents had a higher frequency of positive alcohol readings than persons admitted for nonaccident reasons (table 4). For both men and women, occupation accident injuries had the lowest frequency of positive alcohol readings. Persons admitted for injuries resulting from fights or assaults had the highest frequency of positive readings as compared with persons admitted for other reasons.

AGE. Patients were divided into four age groups: 16 to 25 years, 26 to 45 years, 46 to 65 years, and over 65 years. In each age group alcohol involvement was related beyond the 0.001 level to reason for admission. For all groups, accident cases had a higher frequency of positive Breathalyzer readings than nonaccident cases. Chi-square values for 5 degrees of freedom were 16 to 25 years, 134.50; 26 to 45 years, 156.52;

46 to 65 years, 86.05; and over 65 years, 35.24. In nearly all age groups among the accident cases, transportation accident injuries were highest in percentage of positive readings and occupation accident injuries were lowest. Certain cells (table 4) were too small in the oldest age group to permit detailed comparisons.

MARITAL STATUS. Marital status was studied by comparing persons who were single, currently married, or previously married (widowed, divorced, or separated). In each of these three categories, the association between alcohol level and reason for admission was significant beyond the 0.001 level. Chi-square values for 5 degrees of freedom were single, 203.34; currently married, 145.68; and previously married, 86.22. In each group, a higher frequency of positive alcohol readings was found for accident patients than nonaccident patients. Among accident patients, the highest proportion of positive readings was found for transportation accident injuries and the lowest for occupation accident injuries. The highest frequency of positive readings was found among patients with injuries resulting from fights or assaults.

SOCIAL CLASS. Patients were ranked according to the Hollingshead "Two-Factor Index of

Table 4. Percentage of patients with positive Breathalyzer readings, by reason for admission, controlled by patient characteristics

Patient characteristics	Home accidents		Transportation accidents		Occupation accidents		Other accidents		Fights or assaults		Non-accidents	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Sex:												
Men.....	267	31.5	239	37.7	825	16.5	430	34.9	163	58.3	1,277	10.7
Women.....	353	15.3	165	17.6	144	10.4	378	11.9	25	44.0	1,356	7.0
Age group (years):												
16-25.....	177	19.2	203	27.6	298	9.7	335	21.2	78	48.7	603	7.2
26-45.....	199	25.1	120	35.0	416	19.2	206	32.5	74	66.2	724	12.0
46-65.....	134	23.9	61	32.8	237	16.5	175	26.3	30	60.0	711	10.6
Over 65.....	110	20.0	20	5.0	18	16.7	91	12.1	6	16.7	591	4.7
Marital status:												
Single.....	218	24.8	220	25.4	309	10.7	427	24.8	119	55.5	810	8.2
Married.....	286	19.2	145	33.1	591	17.8	252	23.8	52	53.8	1,267	9.3
Widowed, divorced, or separated.....	113	25.7	36	41.7	67	19.4	125	23.2	17	70.6	533	9.0
Social class:¹												
I and II.....	82	13.4	62	29.0	36	0	125	21.6	18	61.1	236	6.7
III.....	97	21.6	68	29.4	82	13.4	145	20.0	24	58.3	272	12.5
IV.....	193	20.7	157	29.3	486	15.8	257	27.6	68	50.0	783	7.4
V.....	203	26.1	88	30.7	337	17.2	213	22.5	62	61.3	1,109	9.4

¹ Hollingshead "Two-Factor Index of Social Position," reference 10. Classes I and II are high and class V is low.

NOTE: Number=total cases with available information.

Table 5. Percentage of home accident patients with positive Breathalyzer readings, by external cause and nature of injury.

Home accident injuries	Breathalyzer readings	
	Number of patients	Percent positive
External cause.....	¹ 612	21.4
Accidental falls.....	272	22.8
Cutting and piercing instruments.....	140	25.7
Collisions with persons or objects.....	63	25.4
Fires or explosions.....	33	18.2
Other.....	104	10.6
Nature of injury.....	² 613	21.4
Lacerations and abrasions..	208	27.4
Fractures and dislocations..	124	15.3
Contusions.....	113	19.5
Sprains.....	76	14.5
Head injuries.....	53	30.2
Burns.....	31	16.1
Other.....	8	12.5

¹ Information not available on 8 patients.

² Information not available on 7 patients.

Social Position" (10) and were studied separately in classes I and II (high), class III, class IV, and class V (low). In classes III, IV, and V, reason for admission was related to presence of alcohol beyond the 0.001 level. Chi-square values for 5 degrees of freedom were class III, 38.95; class IV, 144.80; and class V, 163.43. The direction of the relationship was maintained for classes I and II; however, a chi-square analysis could not be done because of the lack of observations in one cell. Again, more accident patients in all social classes had positive alcohol readings than nonaccident patients. Patients with transportation injuries had the highest frequency of positive readings and those with occupation injuries, the lowest. Among all social classes, patients with injuries resulting from fights or assaults had uniformly high frequencies of positive alcohol readings.

Analysis of home accident injuries. Home accident injuries were examined in greater detail to learn whether the presence of alcohol, as determined by the Breathalyzer test, was associated with the external cause and nature of the resulting injury. Alcohol involvement was about the same for the major categories of external causes but lower for causes categorized as

"other" (table 5). The relationship was significant: $\chi^2=9.91$, 4 degrees of freedom, $P<0.05$. The relationship between nature of injury and presence of alcohol was also significant: $\chi^2=12.93$, 6 degrees of freedom, $P<0.05$. Alcohol involvement was greatest among the patients with head injuries, lacerations, and contusions.

Discussion

For the first time, an involvement of alcohol in home accidents has been indicated by a systematic large-scale study using objective measures of alcohol level. Some caution, however, must be exercised in interpreting the results.

First, the study is correlational and cannot be viewed as establishing a causal relationship between consumption of alcohol and occurrence of accidental injuries.

Second, the comparison group of nonaccident cases may not have been representative of the community with respect to alcohol level since it was composed of ill persons seeking treatment. Nevertheless, when factors such as general diagnostic grouping, age, sex, marital status, and social class were considered, this comparison group still had a strikingly lower alcohol level than the patients with accident injuries. In theory, it would have been preferable to use control respondents who were selected from residents of the area where the home accident occurred and who were studied at the same time of day and day of the week as the accident, but such a design would be difficult to implement and would result in a much higher refusal rate, thus biasing the sample.

Finally, the alcohol level of the patient was measured at the time of admission rather than at the time of the accident. Several factors precluded the accurate estimation of alcohol level at the time of the accident, including the impracticability of obtaining two Breathalyzer readings for each patient to determine individual decay rates. Analyses that controlled for chronology of drinking and delay in obtaining treatment, however, indicated that the relationship between alcohol level and reason for admission was maintained for those patients who reported no consumption of alcohol after the accident or onset of symptoms and who arrived in the emergency service less than 3 hours after the episode.

Summary

To determine the presence or absence of alcohol in persons admitted to the emergency service of the Massachusetts General Hospital in Boston for treatment of home accident injuries, Breathalyzer readings for 5,622 patients were collected. Venous blood analyses or observations on alcoholic breath were obtained for an additional 1,222 patients.

The results of statistical analyses, significant at the 0.05 level or beyond, indicated that the presence of alcohol on admittance was associated with the reason for admission. Among patients with home accident injuries, 22.3 percent had a positive Breathalyzer reading. As shown by Breathalyzer tests, the highest involvement of alcohol, 29.5 percent, was for patients with transportation accident injuries. Less alcohol involvement was indicated for patients with occupation accident injuries, 15.5 percent, and "other" accident injuries, 24.1 percent.

A strikingly high involvement of alcohol was found among persons admitted to the emergency service for treatment of injuries from fights or assaults; 56.4 percent had a positive Breathalyzer reading. A uniformly low involvement, 8.9 percent, was found among patients admitted for nonaccident reasons.

These findings were substantiated when other signs of alcohol involvement were used and were maintained when controls were applied for drinking after the accident or onset of symptoms and for delay between the episode and arrival in the emergency service as well as for sex, age, marital status, and social class.

Among home accident injuries, statistically significant relationships were found between presence of alcohol and external cause and nature of the resulting injury. Positive readings for alcohol were equally distributed among those injured in falls, collisions, and fires and by cutting or piercing instruments. Patients with head injuries or lacerations more frequently had positive alcohol readings than patients with other types of injuries such as fractures, contusions, sprains, or burns.

The study established that a higher proportion of positive alcohol readings occurred

among home accident victims and other accident patients than among a comparison group of nonaccident patients admitted to the same hospital emergency service. The findings are consistent and clearcut and implicate alcohol as a factor in home accident injuries as well as in injuries from transportation, occupation (although the findings were less definite here), and other types of accidents and in injuries resulting from fights or assaults.

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Teasheet Requests

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